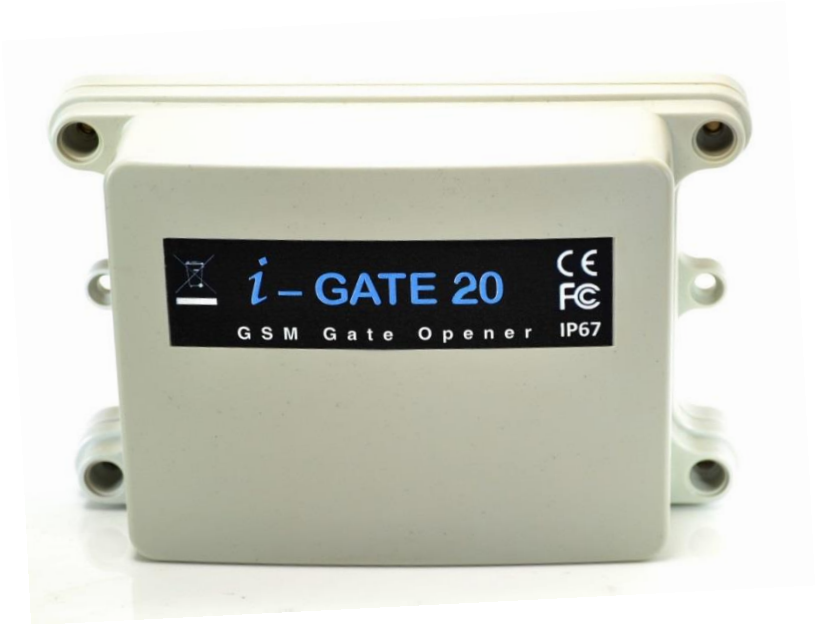
Installation Manual

for



i-GATE 20

GSM Cellular Gate opener

Do not install

In wet conditions

WARRANTY VOID!

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1. Introduction

This device can be used for phone access control of gates, doors or barriers. The unit can store up to 20 telephone numbers. Any of these numbers can call the unit to activate the relay output at no call cost or send a SMS text message to control the relay.

The unit will operate on quad band cellular frequencies operating in most countries. The frequencies are 850MHz, 900 MHz, 1800MHz, and 1900 MHz..

2. Tips

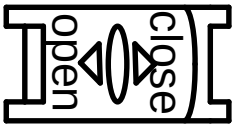
1) Make sure there is adequate reception on site before deciding to install this system. Conduct a site survey and use your mobile phone or third party app to check reception levels first. Choose a SIM card which has good reception levels on site. Low or even medium reception levels are not sufficient.
2) Bench test this device in your workshop. Program it and check it operates before installing on site.

3. SIM Card

Before inserting the SIM card, check the following…

1) The SIM is a 2G SIM for standard models, or a dual 2G / 3G SIM for the 3G version.
2) The SIM must be a standard cell phone type SIM which supports voice and SMS text messages. Data is not required for operation of this device. Do not select a tablet SIM as these only support data, and do not support voice.
3) Check the SIM has credit, and can make and receive calls in a cell phone first.
4) Ensure the SIM does not have a PIN code lock. If so, disable this in a phone.
5) If the SIM was purchased along with a phone, it may be locked to that phone. Please check the SIM can work in another phone or device. If not, ask your network service provider to unlock it so that it can be used in another device.

You may now insert the SIM card, **ensuring the power is OFF first**.

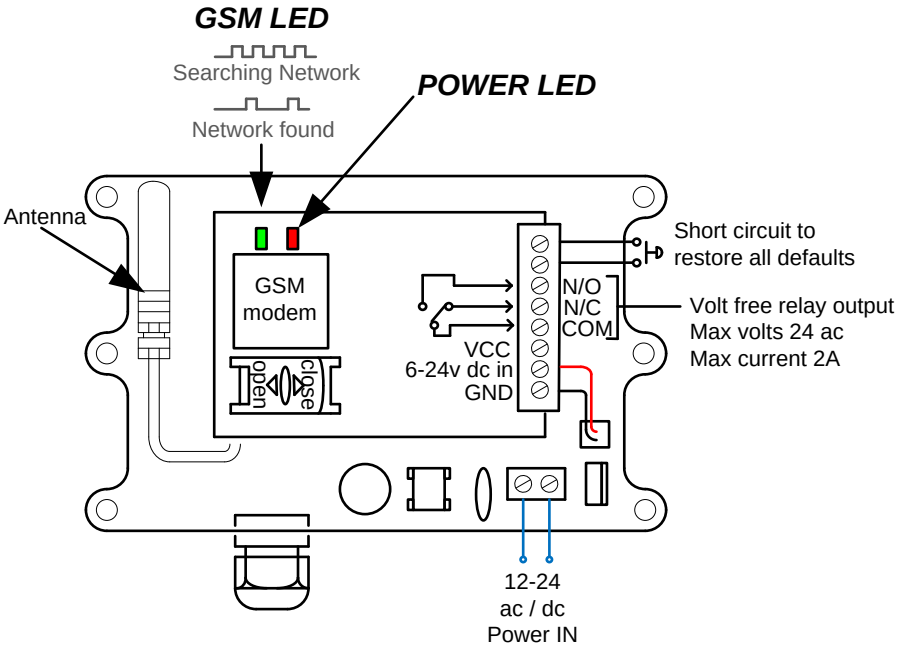


CAREFULLY slide the holder in the open direction and then open the SIM holder door.

Insert the SIM, close the door, and slide in the close direction until it clicks.

4. Wiring

You may now connect power to the unit. The unit can accept 12-24v ac or dc. For gate installers, 24v ac or dc is recommended. Please do NOT USE MAINS power, as this will damage the unit and void the warranty.



Tip: Power cable should be less than 3 meters (10 feet). Do not use thin cables such as alarm cable or CAT5 cable to power this unit. The standby current is 45mA, however this increases to 200mA when dialling out, with spikes of current draw up to 2 amps.

Avoid using poor quality cheap DC power supplies to power the unit. The unit will work best when powered from a 24v ac or dc supply, which is then regulated and smoothed by the built in circuitry.

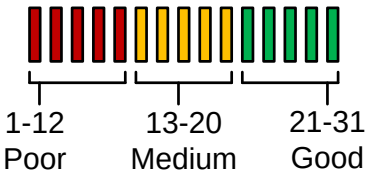
Power up the unit. After 10 seconds or so, the GSM LED should begin flashing. If this does not happen, power the unit off, and check the SIM card is seated correctly, and power it on again. Ensure the steps above regarding the SIM card have been followed.

5. Programming

The unit is programmed by SMS text message from a cell phone.

Check Reception

Send the SMS ***20#** as shown, to the SIM card number of the device. The unit should reply with the network name and reception level between 1 and 31.

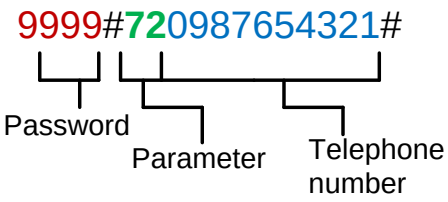


Note: Reception levels below 14 can give problems with the relay operation or the unit will not receive calls. Reception can increase and decrease depending on the weather.

If reception levels are low, take action! Either increase the height of the device to improve reception or request a higher gain antenna from your distributor or change to another network which may have better coverage.

Adding numbers for access…

You will need to enter the phone numbers of any phones you wish to have access. Note that the unit only compares the last 6 digits of the incoming call with memory, so you can either store the entire number, or simply the last 6 digits of the number. The programming format beings with the programmer's passcode, followed by #, followed by the function code, followed by the data. Example as follows..



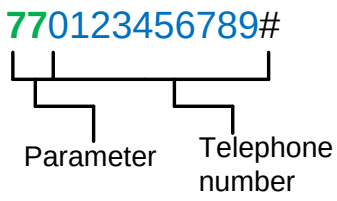
The example shown will store number 0987654321 in momnry. The unit will reply to the SMS command with a SMS stating "Add a phone number success" as shown to the right.

Note: 9999 is the default programmers passcode.

Adding a service number

This is important for Pay & Go or Pre-Pay SIM cards. Many networks will de-activate a SIM card if it does not make a chargeable call every so often. To get around this problem, this unit can be programmed with a service number which it will call every 30 days. You can have it call the home owner, or the engineer's phone, or to avoid a nuisance call from it once per month, it could instead be programmed to call a talking clock number in your country.

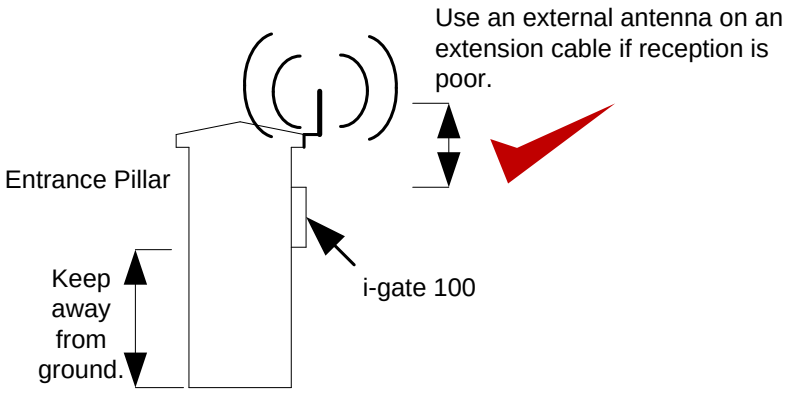
Below is an example. Use 77 feature to add a service number (no passcode needed)…



You may test the caller ID feature by calling the device from a phone which has been stored. The unit should ring only once or twice, hand up and trigger the relay. The relay is default for a 1 second momentary click. If you need to change this, please refer to the full programming table.

6. Installing

The enclosure is IP67 weather proof rated, and for best reception, the device should be installed outdoors, high off the ground, away from metal objects and shrubs.
If you are using this for a barrier control, then you MUST use an external antenna OUTSIDE the barrier enclosure, as the unit will not have reception otherwise.



Connect the N/O and COM of the output relay on the device to the Start command and common of your gate / barrier controller PCB

7. Complete list of parameters

The table below show the complete list of features in the cellular part of the intercom.

Code	Description	Default
Changing pass codes		
9999#**01**????#	Change programming password	9999
9999#**02**????#	Change access control password. This password allows entry by phone for users not stored in Caller ID list by SMS text.	1234
12.3 Timings		
9999#**50**?#	Relay time. Where ? = seconds, 1-9999.	1 sec
Scheduled service calls		
77number#	Store a service number to receive a scheduled call from the unit every 30 days. Useful for SIM cards which are not often used to prevent switch off by the network provider.	N/A
Caller ID features		
9999#**72**number#	Store caller ID number. Max 14 digits.	N/A
9999#**73**number#	Delete caller ID number.	N/A
9999#**73***#	Delete all caller ID numbers	N/A
Service & diagnostic messages		
*20#	Check reception level (1-31). (No passcode needed).	N/A
Restore Defaults		
9999#**999**#	Clear all programming.	N/A

8. User instructions

The user can call the SIM number of the intercom from their phone. If their number is stored then the device will hand up the call without answering and trigger the gates or door with a momentary trigger.

The user can also send the following SMS text messages to further control the unit..

The examples below assume that the default user code is 1234.

Trigger Output

Latch Output

Unlatch Output

9. Using the APP

The App is available for Android and Iphone devices called **GSM-Gate**.

Note: Before the app can be used, the sim card number and SMS text strings as shown above will needed entered in the settings screen.

The App will send the SMS strings for you, so you don't need to remember the codes.

Press to trigger gates.

For gates set for automatic closing, press to hold open

For gates set for automatic closing, press to allow the gates to close again.

Information

More buttons..

-Check gate status N/A

-Check signal strength

-Check stored numbers N/A

10.Troubleshooting guide

Q. The unit will not power up. No LED activity.
A. Check power supply voltage at the unit. Reboot the unit and wait for LED flashing.

Q. The unit powers up but the LED is still flashing rapidly.
A. This means the unit is not able to detect the network for some reason.
-Check the SIM card is activated and has calling credit.
-Power off the unit, remove the SIM and check it in a mobile phone to verify it can make and receive a call.
-Check the SIM does not ask for a PIN code when put in a phone. If it does, then disable the PIN code request.
-Check the SIM is a standard GSM SIM, not 3G or 4G only SIM. If you are unsure, contact your SIM card provider to verify. Frequency of operation should be any one of the international quad band standards, 850 / 900 / 1800 / 1900 MHz.
-Check the reception is very good. Poor reception is not sufficient.

Q. The caller ID part does not work.
-Ensure the number is entered as you would normally dial it from another phone.
-Do not put the country code in front of the number.
International callers ringing the intercom may not work.
-For USA customers, did you try entering the number both with and without the long distance 1 before the number?

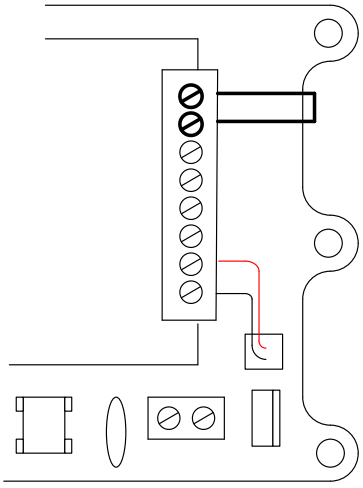
Q. The system was operating the gates fine, but now it will not trigger the gates.
Send the unlatch SMS, and try again. This will ensure the output relay is not held in its on state..

Q. The system was working fine, but has stop recognising all numbers.
A. This can be due to using poor quality power supply. It is recommended that the unit is supplied from a 24v ac or 24v dc supply, which is then regulated and smoothed by the built in convertor.

11.Restore Defaults

This can be done by SMS, but in some cases, if the unit las locked up or if the engineering passcode is forgotten or not known, then it may be necessary to initiate a hard reset as follows..

1) Power off the unit.
2) Make a short circuit as shown on the wiring diagram for the hard reset.
3) Switch on the unit
4) Wait for 15 seconds.
5) Power the unit off, remove the short.
6) Power on again. The device should be defaulted.



Caution: All numbers will be erased when a soft or hard reset is carried out.